

111TH CONGRESS
1ST SESSION

S. 661

To strengthen American manufacturing through improved industrial energy efficiency, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 19, 2009

Mr. BINGAMAN (for himself, Ms. COLLINS, Ms. STABENOW, Ms. SNOWE, Mr. BAYH, Mr. BROWN, and Mr. PRYOR) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To strengthen American manufacturing through improved industrial energy efficiency, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Restoring America’s
5 Manufacturing Leadership through Energy Efficiency Act
6 of 2009”.

1 **SEC. 2. INDUSTRIAL ENERGY EFFICIENCY GRANT PRO-**
 2 **GRAM.**

3 Section 399A of the Energy Policy and Conservation
 4 Act (42 U.S.C. 6371h–1) is amended—

5 (1) in the section heading, by inserting “**AND**
 6 **INDUSTRY**” before the period at the end;

7 (2) by redesignating subsections (h) and (i) as
 8 subsections (i) and (j), respectively; and

9 (3) by inserting after subsection (g) the fol-
 10 lowing:

11 “(h) INDUSTRIAL ENERGY EFFICIENCY GRANT PRO-
 12 GRAM.—

13 “(1) IN GENERAL.—The Secretary shall carry
 14 out a program under which the Secretary shall pro-
 15 vide grants to eligible lenders to pay the Federal
 16 share of creating a revolving loan program under
 17 which loans are provided to commercial and indus-
 18 trial manufacturers to implement commercially avail-
 19 able technologies or processes that significantly—

20 “(A) reduce systems energy intensity, in-
 21 cluding the use of energy intensive feedstocks;
 22 and

23 “(B) improve the industrial competitive-
 24 ness of the United States.

25 “(2) ELIGIBLE LENDERS.—To be eligible to re-
 26 ceive a grant under this subsection, a lender shall—

1 “(A) be a community and economic devel-
2 opment lender that the Secretary certifies meets
3 the requirements of this subsection;

4 “(B) lead a partnership that includes par-
5 ticipation by, at a minimum—

6 “(i) a State government agency; and

7 “(ii) a private financial institution or
8 other provider of loan capital;

9 “(C) submit an application to the Sec-
10 retary, and receive the approval of the Sec-
11 retary, for a grant to carry out a loan program
12 described in paragraph (1); and

13 “(D) ensure that non-Federal funds are
14 provided to match, on at least a dollar-for-dol-
15 lar basis, the amount of Federal funds that are
16 provided to carry out a revolving loan program
17 described in paragraph (1).

18 “(3) PRIORITY.—In making grants under this
19 subsection, the Secretary shall provide a priority to
20 partnerships that include a power producer or dis-
21 tributor.

22 “(4) AWARD.—The amount of a grant provided
23 to an eligible lender shall not exceed \$100,000,000
24 for any fiscal year.

1 “(5) ELIGIBLE PROJECTS.—A program for
2 which a grant is provided under this subsection shall
3 be designed to accelerate the implementation of in-
4 dustrial and commercial applications of technologies
5 or processes that—

6 “(A) improve energy efficiency;

7 “(B) enhance the industrial competitive-
8 ness of the United States; and

9 “(C) achieve such other goals as the Sec-
10 retary determines to be appropriate.

11 “(6) EVALUATION.—The Secretary shall evalu-
12 ate applications for grants under this subsection on
13 the basis of—

14 “(A) the description of the program to be
15 carried out with the grant;

16 “(B) the commitment to provide non-Fed-
17 eral funds in accordance with paragraph
18 (2)(D);

19 “(C) program sustainability over a 10-year
20 period;

21 “(D) the capability of the applicant;

22 “(E) the quantity of energy savings or en-
23 ergy feedstock minimization;

24 “(F) the advancement of the goal under
25 this Act of 25-percent energy avoidance;

1 “(G) the ability to fund energy efficient
2 projects not later than 120 days after the date
3 of the grant award; and

4 “(H) such other factors as the Secretary
5 determines appropriate.

6 “(7) AUTHORIZATION OF APPROPRIATIONS.—

7 There is authorized to be appropriated to carry out
8 this subsection \$500,000,000 for each of fiscal years
9 2010 through 2012.”.

10 **SEC. 3. COORDINATION OF RESEARCH AND DEVELOPMENT**
11 **OF ENERGY EFFICIENT TECHNOLOGIES FOR**
12 **INDUSTRY.**

13 As part of the research and development activities of
14 the Industrial Technologies Program of the Department
15 of Energy, the Secretary of Energy shall establish, as ap-
16 propriate, collaborative research and development partner-
17 ships with other programs within the Office of Energy Ef-
18 ficiency and Renewable Energy, including the Building
19 Technologies Program, the Office of Electricity Delivery
20 and Energy Reliability, and programs of the Office of
21 Science—

22 (1) to leverage the research and development
23 expertise of those programs to promote early stage
24 energy efficiency technology development; and

1 (2) to apply the knowledge and expertise of the
2 Industrial Technologies Program to help achieve the
3 program goals of the other programs.

4 **SEC. 4. ENERGY EFFICIENT TECHNOLOGIES ASSESSMENT.**

5 (a) IN GENERAL.—Not later than 60 days after the
6 date of enactment of this Act, the Secretary of Energy
7 shall commence an assessment of commercially available,
8 cost competitive energy efficiency technologies that are not
9 widely implemented within the United States for the en-
10 ergy intensive industries of—

- 11 (1) steel;
- 12 (2) aluminum;
- 13 (3) forest and paper products;
- 14 (4) food processing;
- 15 (5) metal casting;
- 16 (6) glass;
- 17 (7) chemicals; and
- 18 (8) other industries that (as determined by the
19 Secretary)—
- 20 (A) use large quantities of energy;
- 21 (B) emit large quantities of greenhouse
22 gas; or
- 23 (C) use a rapidly increasing quantity of en-
24 ergy.

1 (b) REPORT.—Not later than 1 year after the date
 2 of enactment of this Act, the Secretary shall publish a re-
 3 port, based on the assessment conducted under subsection
 4 (a), that contains—

5 (1) a detailed inventory describing the cost, en-
 6 ergy, and greenhouse gas emission savings of each
 7 technology described in subsection (a);

8 (2) for each technology, the total cost, energy,
 9 and greenhouse gas emissions savings if the tech-
 10 nology is implemented throughout the industry of
 11 the United States;

12 (3) for each industry, an assessment of total
 13 possible cost, energy, and greenhouse gas emissions
 14 savings possible if state-of-the art, cost-competitive,
 15 commercial energy efficiency technologies were
 16 adopted; and

17 (4) for each industry, a comparison to the Eu-
 18 ropean Union, Japan, and other appropriate coun-
 19 tries of energy efficiency technology adoption rates,
 20 as determined by the Secretary.

21 **SEC. 5. FUTURE OF INDUSTRY PROGRAM.**

22 (a) IN GENERAL.—Section 452(c)(2) of the Energy
 23 Independence and Security Act of 2007 (42 U.S.C.
 24 17111(c)(2)) is amended by striking the section heading

1 and inserting the following: “**FUTURE OF INDUSTRY**
 2 **PROGRAM**”.

3 (b) INDUSTRY-SPECIFIC ROAD MAPS.—Section
 4 452(c)(2) of the Energy Independence and Security Act
 5 of 2007 (42 U.S.C. 17111(c)(2)) is amended—

6 (1) in subparagraph (E), by striking “and” at
 7 the end;

8 (2) by redesignating subparagraph (F) as sub-
 9 paragraph (G); and

10 (3) by inserting after subparagraph (E) the fol-
 11 lowing:

12 “(F) research to establish (through the In-
 13 dustrial Technologies Program and in collabora-
 14 tion with energy-intensive industries) a road
 15 map process under which—

16 “(i) industry-specific studies are con-
 17 ducted to determine the intensity of energy
 18 use, greenhouse gas emissions, and waste
 19 and operating costs, by process and sub-
 20 process;

21 “(ii) near-, mid-, and long-term tar-
 22 gets of opportunity are established for syn-
 23 ergistic improvements in efficiency, sus-
 24 tainability, and resilience; and

1 “(iii) public/private actionable plans
 2 are created to achieve roadmap goals;
 3 and”.

4 (c) INDUSTRIAL RESEARCH AND ASSESSMENT CEN-
 5 TERS.—

6 (1) IN GENERAL.—Section 452(e) of the En-
 7 ergy Independence and Security Act of 2007 (42
 8 U.S.C. 17111(e)) is amended—

9 (A) by redesignating paragraphs (1)
 10 through (5) as subparagraphs (A) through (E),
 11 respectively, and indenting appropriately;

12 (B) by striking “The Secretary” and in-
 13 serting the following:

14 “(1) IN GENERAL.—The Secretary”;

15 (C) in subparagraph (A) (as redesignated
 16 by subparagraph (A)), by inserting before the
 17 semicolon at the end the following: “, including
 18 assessments of sustainable manufacturing goals
 19 and the implementation of information tech-
 20 nology advancements for supply chain analysis,
 21 logistics, industrial and manufacturing proc-
 22 esses, and other purposes”; and

23 (D) by adding at the end the following:

24 “(2) CENTERS OF EXCELLENCE.—

1 “(A) IN GENERAL.—The Secretary shall
2 establish a Center of Excellence at up to 10 of
3 the highest performing industrial research and
4 assessment centers, as determined by the Sec-
5 retary.

6 “(B) DUTIES.—A Center of Excellence
7 shall coordinate with and advise the industrial
8 research and assessment centers located in the
9 region of the Center of Excellence.

10 “(C) FUNDING.—Subject to the availability
11 of appropriations, of the funds made available
12 under subsection (f), the Secretary shall use to
13 support each Center of Excellence not less than
14 \$500,000 for fiscal year 2010 and each fiscal
15 year thereafter, as determined by the Secretary.

16 “(3) EXPANSION OF CENTERS.—The Secretary
17 shall provide funding to establish additional indus-
18 trial research and assessment centers at institutions
19 of higher education that do not have industrial re-
20 search and assessment centers established under
21 paragraph (1).

22 “(4) COORDINATION.—

23 “(A) IN GENERAL.—To increase the value
24 and capabilities of the industrial research and
25 assessment centers, the centers shall—

1 “(i) coordinate with Manufacturing
2 Extension Partnership Centers of the Na-
3 tional Institute of Science and Technology;

4 “(ii) coordinate with the Building
5 Technologies Program of the Department
6 of Energy to provide building assessment
7 services to manufacturers;

8 “(iii) increase partnerships with the
9 National Laboratories of the Department
10 of Energy to leverage the expertise and
11 technologies of the National Laboratories
12 for national industrial and manufacturing
13 needs;

14 “(iv) identify opportunities for reduc-
15 ing greenhouse gas emissions; and

16 “(v) promote sustainable manufac-
17 turing practices for small- and medium-
18 sized manufacturers.

19 “(5) OUTREACH.—The Secretary shall provide
20 funding for—

21 “(A) outreach activities by the industrial
22 research and assessment centers to inform
23 small- and medium-sized manufacturers of the
24 information, technologies, and services avail-
25 able; and

1 “(B) a full-time equivalent employee at
2 each center of excellence whose primary mission
3 shall be to coordinate and leverage the efforts
4 of the center with—

5 “(i) Federal and State efforts;

6 “(ii) the efforts of utilities; and

7 “(iii) the efforts of other centers in
8 the region of the center of excellence.

9 “(6) WORKFORCE TRAINING.—

10 “(A) IN GENERAL.—The Secretary shall
11 pay the Federal share of associated internship
12 programs under which students work with in-
13 dustries and manufactures to implement the
14 recommendations of industrial research and as-
15 sessment centers.

16 “(B) FEDERAL SHARE.—The Federal
17 share of the cost of carrying out internship pro-
18 grams described in subparagraph (A) shall be
19 50 percent.

20 “(C) FUNDING.—Subject to the availability
21 of appropriations of appropriations, of the
22 funds made available under subsection (f), the
23 Secretary shall use to carry out this paragraph
24 not less than \$5,000,000 for fiscal year 2010
25 and each fiscal year thereafter.

1 “(7) SMALL BUSINESS LOANS.—The Adminis-
 2 trator of the Small Business Administration shall, to
 3 the maximum practicable, expedite consideration of
 4 applications from eligible small business concerns for
 5 loans under the Small Business Act (15 U.S.C. 631
 6 et seq.) for loans to implement recommendations of
 7 industrial research and assessment centers estab-
 8 lished under paragraph (1).”.

9 (d) FUTURE OF INDUSTRY PROGRAM.—Section
 10 452(f) of the Energy Independence and Security Act of
 11 2007 (42 U.S.C. 17111(f)) is amended—

12 (1) in paragraph (1)—

13 (A) in subparagraph (C), by striking
 14 “\$196,000,000” and inserting “\$216,000,000”;

15 (B) in subparagraph (D), by striking
 16 “\$202,000,000” and inserting “\$232,000,000”;
 17 and

18 (C) in subparagraph (E), by striking
 19 “\$208,000,000” and inserting “\$248,000,000”;
 20 and

21 (2) by adding at the end the following:

22 “(4) INDUSTRIAL RESEARCH AND ASSESSMENT
 23 CENTERS.—Of the amounts made available under
 24 paragraph (1), the Secretary shall use to provide

1 funding to industrial research and assessment cen-
 2 ters under subsection (e) not less than—

3 “(A) \$20,000,000 for fiscal year 2010;

4 “(B) \$30,000,000 for fiscal year 2011; and

5 “(C) \$40,000,000 for fiscal year 2012 and
 6 each fiscal year thereafter.”.

7 **SEC. 6. SUSTAINABLE MANUFACTURING INITIATIVE.**

8 (a) IN GENERAL.—Part E of title III of the Energy
 9 Policy and Conservation Act (42 U.S.C. 6341) is amended
 10 by adding at the end the following:

11 **“SEC. 376. SUSTAINABLE MANUFACTURING INITIATIVE.**

12 “(a) IN GENERAL.—As part of the Industrial Tech-
 13 nologies Program of the Department of Energy, the Sec-
 14 retary shall carry out a sustainable manufacturing initia-
 15 tive under which the Secretary shall conduct onsite tech-
 16 nical reviews and followup implementation—

17 “(1) to maximize the energy efficiency of sys-
 18 tems;

19 “(2) to identify and reduce harmful emissions
 20 and hazardous waste;

21 “(3) to identify and reduce the use of water in
 22 manufacturing processes;

23 “(4) to identify material substitutes that are
 24 not harmful to the environment; and

1 “(5) to achieve such other goals as the Sec-
2 retary determines to be appropriate.

3 “(b) COORDINATION.—The Secretary shall carry out
4 the initiative in coordination with—

5 “(1) the Manufacturing Extension Partnership
6 Program of the National Institute of Standards and
7 Technology; and

8 “(2) the Administrator of the Environmental
9 Protection Agency.

10 “(c) RESEARCH AND DEVELOPMENT PROGRAM FOR
11 SUSTAINABLE MANUFACTURING AND INDUSTRIAL TECH-
12 NOLOGIES AND PROCESSES.—As part of the Industrial
13 Technologies Program of the Department of Energy, the
14 Secretary shall carry out a joint industry-government
15 partnership program to conduct research and development
16 of new sustainable manufacturing and industrial tech-
17 nologies and processes that maximize the energy efficiency
18 of systems, reduce pollution, and conserve natural re-
19 sources.

20 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
21 are authorized to be appropriated such sums as are nec-
22 essary to carry out this section.”.

23 (b) TABLE OF CONTENTS.—The table of contents of
24 the Energy Policy and Conservation Act (42 U.S.C. prec.

1 6201) is amended by adding at the end of the items relat-
 2 ing to part E of title III the following:

“Sec. 376. Sustainable manufacturing initiative.”.

3 **SEC. 7. INNOVATION IN INDUSTRY GRANTS.**

4 Section 1008 of the Energy Policy Act of 2005 (42
 5 U.S.C. 16396) is amended by adding at the end the fol-
 6 lowing:

7 “(g) INNOVATION IN INDUSTRY GRANTS.—

8 “(1) IN GENERAL.—As part of the program
 9 under this section, the Secretary shall carry out a
 10 program to pay the Federal share of competitively
 11 awarding grants to State-industry partnerships in
 12 accordance with this subsection to develop, dem-
 13 onstrate, and commercialize new technologies or
 14 processes for industries that significantly—

15 “(A) reduce energy use and energy inten-
 16 sive feedstocks;

17 “(B) reduce pollution and greenhouse gas
 18 emissions;

19 “(C) reduce industrial waste; and

20 “(D) improve domestic industrial cost com-
 21 petitiveness.

22 “(2) ADMINISTRATION.—

23 “(A) APPLICATIONS.—A State-industry
 24 partnership seeking a grant under this sub-
 25 section shall submit to the Secretary an applica-

tion for a grant to carry out a project to demonstrate an innovative energy efficiency technology or process described in paragraph (1).

“(B) COST SHARING.—To be eligible to receive a grant under this subsection, a State-industry partnership shall agree to match, on at least a dollar-for-dollar basis, the amount of Federal funds that are provided to carry out the project.

“(C) GRANT.—The Secretary shall provide to a State-industry partnership selected under this subsection a 1-time grant of not more than \$500,000 to initiate the project.

“(3) ELIGIBLE PROJECTS.—A project for which a grant is received under this subsection shall be designed to demonstrate successful—

“(A) industrial applications of energy efficient technologies or processes that reduce costs to industry and prevent pollution and greenhouse gas releases; or

“(B) energy efficiency improvements in material inputs, processes, or waste streams to enhance the industrial competitiveness of the United States.

1 “(4) EVALUATION.—The Secretary shall evalu-
 2 ate applications for grants under this subsection on
 3 the basis of—

4 “(A) the description of the concept;

5 “(B) cost-efficiency;

6 “(C) the capability of the applicant;

7 “(D) the quantity of energy savings;

8 “(E) the commercialization or marketing
 9 plan; and

10 “(F) such other factors as the Secretary
 11 determines to be appropriate.”.

12 **SEC. 8. STUDY OF ADVANCED ENERGY TECHNOLOGY MAN-**
 13 **UFACTURING CAPABILITIES IN THE UNITED**
 14 **STATES.**

15 (a) IN GENERAL.—The Secretary of Energy shall
 16 enter into an arrangement with the National Academy of
 17 Sciences under which the Academy shall conduct a study
 18 of the development of advanced manufacturing capabilities
 19 for various energy technologies, including—

20 (1) an assessment of the manufacturing supply
 21 chains of established and emerging industries;

22 (2) an analysis of—

23 (A) the manner in which supply chains
 24 have changed over the 25-year period ending on
 25 the date of enactment of this Act;

1 (B) current trends in supply chains; and

2 (C) the energy intensity of each part of the
3 supply chain and opportunities for improve-
4 ment;

5 (3) for each technology or manufacturing sec-
6 tor, an analysis of which sections of the supply chain
7 are critical for the United States to retain or develop
8 to be competitive in the manufacturing of the tech-
9 nology;

10 (4) an assessment of which emerging energy
11 technologies the United States should focus on to
12 create or enhance manufacturing capabilities; and

13 (5) recommendations on the leveraging the ex-
14 pertise of energy efficiency and renewable energy
15 user facilities so that best materials and manufac-
16 turing practices are designed and implemented.

17 (b) REPORT.—Not later than 2 years after the date
18 on which the Secretary enters into the agreement with the
19 Academy described in subsection (a), the Academy shall
20 submit to the Committee on Energy and Natural Re-
21 sources of the Senate, the Committee on Energy and Com-
22 merce of the House of Representatives, and the Secretary
23 a report describing the results of the study required under
24 this section, including any findings and recommendations.

1 **SEC. 9. INDUSTRIAL TECHNOLOGIES STEERING COM-**
2 **MITTEE.**

3 The Secretary of Energy shall establish an advisory
4 steering committee to provide recommendations to the
5 Secretary on planning and implementation of the Indus-
6 trial Technologies Program of the Department of Energy.

7 **SEC. 10. AUTHORIZATION OF APPROPRIATIONS.**

8 There are authorized to be appropriated to the Sec-
9 retary such sums as are necessary to carry out this Act.

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